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3677

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Please find below and/or attached an Office communication concerning this application or proceeding.



## DETAILED ACTION

### *Request for Continued Examination*

A request for continued examination under 37 CFR 1.114 including the fee set forth in 37 CFR 1.17(e) was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17 (e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on March 13, 2005 has been entered.

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. §103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 17, 18, 24-26, 28 and 30 are rejected under 35 U.S.C. §103(a) as being unpatentable over DE 3017371 in view of Dolezych (EP 311828) and Berg (US 5832569).

DE 3017371 (figures 2-4) teaches a bi-directional tensioning device for tensioning an anchoring line 24 and a threadable line 3, 21 comprising: a ratcheting system 2, 26 serving to wind the threadable line; a first and second anchoring line attachment means 13, 18 positioned on opposite ends of the ratcheting system, wherein the anchoring line may be removably attached to either anchoring line attachment means. The ratcheting system includes slidably mounted spring-biased drive 6 and blocking 10 pawls. The strap 3 is movable over the blocking mechanism as shown in figure 3. The difference is that the bi-directional tensioning device of DE 3017371 lacks a clear showing of first and second guide means to aid in winding the

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threadable line (but does show a strap guide 13 with parallel plates in figure 4) wherein the first guide means interconnects the two parallel plates and is spaced next to the support surface of the blocking mechanism and the second guide means includes a support surface interconnecting the parallel plate members and is spaced between the second anchoring line attachment means and the rotatable drive element. However, Dolezych (EP 311828, figure 1) teaches tensioning device structure including a ratcheting system and guide shafts 2, which are spaced from shafts 3 so as to aid in defining slots for the two straps to pass through. The guide shafts 2 number three with one at each end and the third located next to the blocking mechanism. Further, Berg (figure 8) teaches the use of a series of bars 19, 23 extending between the parallel plate members, acting as support surfaces and guiding the strap so as to have a simpler connection of the strap to the tensioning device. As control of the tensioning device of DE 3017371 would be desirable so as to prevent the tensioning device from swinging away from the straps, it would have been obvious to modify the tensioning device of DE 3017371 so that it would have first and second guides to aid in guiding the threadable line as taught by Dolezych (EP 311828) and further modification such that the guide shafts 2 of Dolezych (EP 311828) comprise a support surface between the parallel plate members spaced from the anchoring means would have been obvious in view of Berg (figure 8) suggesting the use of a series of bars 19, 23 extending between the parallel plate members, acting as support surfaces and guiding the strap so as to have a simpler connection of the strap to the tensioning device. As to claims 24 and 25, the tensioning devices of DE 3017371 and Dolezych (EP 311828) have the cam surfaces of the teeth oriented to have either a "push" or "pull" power stroke, thereby rendering obvious the subject matter of these claims. In regard to claim 28, the drive pawl of the tensioning device of DE 3017371 is considered to be lengthened.

Claims 27 and 29 are rejected under 35 U.S.C. §103(a) as being unpatentable over DE 3017371 in view of Dolezych (EP 311828) and Berg (US 5832569) as applied to claims 17 and 26 above, and further in view of Huang (US 5778496).

Further modification of the bi-directional tensioning device of DE 3017371 such that a torsional spring biases the drive pawl and the drive pawl is provided with a handle by means of which it may be actuated would have been obvious in view of Huang (figure 1) teaching that a torsion spring 22 provides a compact spring for biasing the slidable drive pawl 21 and that a handle 211 is useful to control the drive pawl.

Claims 34-36, 38 and 40-42 are rejected under 35 U.S.C. §103(a) as being unpatentable over DE 3017371 in view of Dolezych (EP 311828) and McMillen (US 1001547).

DE 3017371 (figures 2-4) teaches a bi-directional tensioning device for tensioning an anchoring line 24 and a threadable line 3, 21 comprising: a ratcheting system 2, 26 serving to wind the threadable line; a first and second anchoring line attachment means 13, 18 positioned on opposite ends of the ratcheting system, wherein the anchoring line may be removably attached to either anchoring line attachment means. The strap 3 is movable over the blocking mechanism as shown in figure 3. The ratcheting system includes slidably mounted spring-biased drive 6 and blocking 10 pawls. The pivot lever includes a control cam 29 as is conventional in this field of endeavor for moving the blocking pawl. The difference is that the bi-directional tensioning device of DE 3017371 lacks a clear showing of first and second guide means to aid in winding the threadable line (but does show a strap guide 13 with parallel plates in figure 4) and both the blocking pawl and the drive pawl lack handles. However, Dolezych (EP 311828, figure 1) teaches tensioning device structure including a ratcheting system and guide shafts 2, which are

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spaced from shafts 3 so as to aid in defining slots for the two straps to pass through. The guide shafts 2 number three with one at each end and the third located next to the blocking mechanism. Additionally, the locking pawl can be operated by the control cam on the pivot lever or inherently by grasping the indentation in the blocking pawl 7 as shown in figure 2. Further, McMillen (figure 1) teaches tensioning device structure and that a handle 16' is useful to control the spring-biased blocking pawl 16 so as to be disengaged from the ratchet wheels 4 and that a handle 14' is useful to control the spring-biased drive pawl 8 so as to be disengaged from the ratchet wheels 4 so as to provide improved efficiency of use. As control of the tensioning device of DE 3017371 would be desirable so as to prevent swings away from the straps, it would have been obvious to modify the tensioning device of DE 3017371 so that it would have first and second guides to aid in guiding the threadable line as taught by Dolezych (EP 311828) who also suggests moving the blocking pawl by either the control cam on the pivot lever or inherently by the pushing on the indentation in the blocking pawl and further modification of the bi-directional tensioning device of DE 3017371 such that the blocking pawl is provided with a handle and the drive pawl is provided with a handle by means of which each may be manually actuated at will would have been obvious in view of McMillen (figure 1) teaching that a handle 16' is useful to control the blocking pawl 16 so as to be disengaged from the ratchet wheels 4 and that a handle 14' is useful to control the drive pawl 8 so as to be disengaged from the ratchet wheels 4 so as to provide improved efficiency of use. As to claim 38, the guide shafts 2 of Dolezych (EP 311828) are circular in cross-section and therefore have a gradient that is curved and it would have been obvious to utilize such a configuration as it would aid in threading the strap through the gap between the shafts. In regard to claim 40, the drive pawl of the tensioning device of DE

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3017371 is considered to be lengthened. As to claim 41, the tensioning devices of DE 3017371 and Dolezych (EP 311828) have the cam surfaces of the teeth oriented to have either a “push” or “pull” power stroke, thereby rendering obvious the subject matter of this claim that provides for the cam surfaces of the teeth to be oriented to have a power stroke.

Claim 39 is rejected under 35 U.S.C. §103(a) as being unpatentable over DE 3017371 in view of Dolezych (EP 311828) and McMillen (US 1001547) as applied to claim 34 above, and further in view of Speich (US 4584742).

Further modification of the bi-directional tensioning device of DE 3017371 as modified by Dolezych (EP 311828) such that the guide shafts 2 of Dolezych (EP 311828) are bolts would have been obvious in view of Speich (figure 1) teaching the desirability of using a guide shaft formed by a rotatable sleeve 17 mounted on a bolt 20 so as to permit removal of the guide and easier threading of the strap.

Claim 37 is rejected under 35 U.S.C. §103(a) as being unpatentable over DE 3017371 in view of Dolezych (EP 311828) and McMillen (US 1001547) as applied to claim 34 above, and further in view of Berg (US 5832569).

Further modification of the bi-directional tensioning device of DE 3017371 as modified by Dolezych (EP 311828) such that the guide shafts 2 of Dolezych (EP 311828) comprise a support surface between the parallel plate members spaced from the anchoring means would have been obvious in view of Berg (figure 8) suggesting the use of a series bars 19, 23 extending between the parallel plate members, acting as support surfaces and guiding the strap so as to have a simpler connection of the strap to the tensioning device.

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Claims 32 and 33 are rejected under 35 U.S.C. §103(a) as being unpatentable over McMillen (US 1001547) in view of Kranz (US 1287050) and Dolezych (EP 311828).

McMillen (figure 1) teaches a method for partially releasing a chain from a tensioning device, the tensioning device including a ratchet wheel 4 serving to wind the chain, the ratchet wheel including directionally oriented notches, a drive part 8 in engagement with a first directionally oriented notch of the ratchet wheel, the drive part serving to turn the ratchet wheel in a second direction by engaging the first notch only when the drive part is moved along a distance in the second direction, wherein the drive part blocks movement of the ratchet wheel in the first direction when the drive part is maintained at a point along the distance, and a blocking mechanism 16 in blocking engagement with a second directionally oriented notch of the ratchet wheel, the blocking mechanism serving to block movement of the ratchet wheel in the first direction, and the blocking mechanism including a handle portion 16', the method inherently taught by this structure comprising: positioning and maintaining the drive part at a point along the distance such that the drive part is capable of moving in the first direction; pulling the handle portion of the blocking mechanism to remove the blocking mechanism from the blocking engagement with the second notch of the ratchet wheel; moving the drive part in the first direction so as to enable the ratchet wheel to turn in the first direction, thereby moving the second notch past the blocking mechanism; and releasing the handle portion of the blocking mechanism to enable the blocking mechanism to return to blocking engagement with a third directionally oriented notch of the ratchet wheel. The difference is that McMillen teaches utilizing a chain as the tensioning element rather than a line. The chain is threadable by being passed through the gap between the drive part 8 and the reel. Additionally, there is no control



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cam on the drive part. However, Kranz (figures 1, 2) teaches a method of utilizing a tensioning device including a ratchet wheel, the ratchet wheel including directionally oriented notches, a drive part that is pivotally connected to a handle, a blocking mechanism pivotally connected to the frame, and wherein the tensioning device can be either a chain or cable as indicated on page 1, lines 32-35 and Dolezych (figures 1, 2) teaches moving the blocking pawl by either the control cam on the pivot lever or inherently by the pushing on the indentation in the blocking pawl. As it is beneficial to use different tensioning elements not just the chain, it would have been obvious to modify the device of McMillen in order to utilize a cable as taught by Kranz to be a conventional equivalent and to further taking advantage of the inherent structure of Dolezych to have both a control cam or inherently move the blocking pawl by the indentation in the blocking pawl.

### *Response to Arguments*

Applicant's arguments filed in response to the last office action have been fully considered but they are not persuasive.

Applicant argues that Dolezych fails to show the threadable line over the blocking mechanism. However, the DE 3017371 reference shows such structure and Dolezych is utilized for its teaching of guides that is applicable to the teachings of DE 3017371. Applicant asserts that the threadable line extends underneath the blocking mechanism. However, there is no basis for applicant to assert a distinguishing direction from the claim construction to differentiate from the applied structures of DE 3017371 and Dolezych (EP 311828). What applicant is calling underneath is still over the blocking mechanism. In other words, one can hold the assembly so that the strap is between the viewer and the blocking mechanism so that it is "over the blocking

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mechanism". There may be some basis in the disclosure for applicant's argument, but the claims do not provide commensurate detail to coincide with applicant's argument. Applicant asserts that because the buckle of Berg is used with "high loads" (col. 1, lines 30-43) to secure loads safely that somehow safe use would not be a motivation to modify the base references. This argument is not persuasive because the issue of safety with straps in a cargo situation is obviously a motivation to combine the art. Applicant further argues that it would not be obvious to manipulate the blocking pawl by two methods. Dolezych shows that the blocking pawl can be manipulated by the control cam on the pivot lever or inherently by the pushing on the indentation in the blocking pawl 7 shown in figure 2. Similarly, with respect to claim 32, Dolezych inherently provides for two ways to manipulate the blocking pawl, either by the control cam on the pivot lever or by the indentation in the blocking pawl.

### *Conclusion*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to James R. Brittain whose telephone number is (571) 272-7065. The examiner can normally be reached on M-F 5:30-2:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, J. J. Swann can be reached on (571) 272-7075. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



James R. Brittain  
Primary Examiner  
Art Unit 3677

JRB